

REMARKS/ARGUMENTS

Introduction

Receipt of the Office Action mailed January 18, 2007 is acknowledged. Reconsideration of this application is requested. The claims presented for reconsideration are claims 9-12 and 15-20. Favorable reconsideration is earnestly solicited.

Claim Rejections - 35 U.S.C § 102(b)/103(a)

On page 2 of the Action, claims 9, 12 and 19 were rejected under 35 USC 102(b) and/or 103(a) as allegedly being unpatentable over Haszler, US Patent No 6,406,567. On page 5 of the Action, claims 10, 11, 15-18 and 20 have been rejected under 35 USC 103(a) over Haszler.

On page 3 of the Action, claims 9, 12 and 20 have been rejected under 35 USC 102(b) and/or 103(a) over EP 1158068A1 ("EP '068"). On page 4 of the Action, claims 10, 11, and 15-19 have been rejected under 35 USC 103(a) over EP '068.

These rejections are respectfully traversed for at least the following reasons.

Haszler describes a process wherein a compression step is performed in the through thickness direction (see column 3 lines 35-38). Drawbacks of the prior art through thickness compression relieving process as taught by Haszler will inevitably occur on such product produced thereby. Paragraphs [0030] to [0032] of the present specification explains specifically why such processes result in non-uniform and generally high residual (or internal) stress levels. Similarly EP '068 describes a process according to the prior art compression relieving process. As stated in [0027] of EP'068, the plate is "stress relieved by compression in the ST direction with 1.5% deformation."

The ST direction is the through thickness direction, the compression relieving process of EP'068 is thus according to prior art.

The present invention, on the other hand, is directed to products having very low stored elastic energy (the stored elastic energy WT_{bar} along the T direction is less than 0.5 kJ/m^3). This type of product can be obtained by using an "edge-on stress-relief" process wherein compression is performed through the width or the length of product itself. It is respectfully submitted that the products of Haszler and/or EP '068 fail to teach or suggest plates having the claimed stored elastic energy of claims 9 or 12. Nor does Haszler or EP '068 teach or suggest a workpiece or spar produced by a process as recited in claim 19 or 20. Namely, prior art processes such as those conducted by Haszler or EP '068 require that compression be performed through the thickness of the plate (see [0006] to [0008] of the present specification).

To the contrary, as discussed for example in [0049], in an "edge-on stress relief" process, compression is performed "through width" or "through length", which significantly reduces the surface area to compress and thus reduces the number of compression steps and hence the number of overlaps. The claimed plates of claims 9 and 12 and the claimed workpiece of claim 19 and spar of claim 20 are simply not contemplated by Haszler or EP '068 and there is no reasonable basis to content that Haszler's or EP'068's products would meet the present claim requirements. Before an anticipation rejection can be asserted, it must be established that there is a reasonable basis for contending that a claimed condition is inherent. Here, there is simply no reason for a contention of inherency of the claimed property values in terms of stored elastic energy would have been met by either Haszler or EP '068. Hence, the rejections based on 102(b) are improper and should be withdrawn.

Moreover, paragraph [0056]¹ of the published Applicants' application has even demonstrated that for prior art products, it is not possible to obtain a WT_{bar} lower than 0.5 kJ/m³ in every region of the product². Indeed, this feature is positively recited in claim 9 which states as follows: "wherein the stored elastic energy WT_{bar} along the T direction is less than 0.5 kJ/m³." The values for WT_{bar} of 3.5 and 0.37 kJ/m³ discussed in [0056] are values obtained inside and outside the overlap region which will inevitably occur with a process such as that taught by Haszler or EP '068. As such, there is no basis to conclude that Haszler's or EP '068's products have the claimed stored elastic energy of claims 9 or 12. Indeed, Applicants have provided evidence that Haszler's and EP '068's products would NOT possess the recited stored energy values in their specification in [0056]. On the other hand, products of the claimed invention do, in fact, have WT_{bar} values that are less than 0.5 kJ/m³ since it is reported in [0056] that products according to the invention have WT_{bar} values of 0.06 and 0.14 kJ/m³, which are significantly lower than 0.5 kJ/m³ as claimed in claim 9. So the 102(b) rejections are improper for yet this further reason.

As to the 35 USC 103 rejections based on Haszler and EP '068, it is respectfully submitted that neither of these documents suggest that reduced stored energy values could be obtained at all, much less provide a mechanism for doing so. This is the invention of Applicants, and any contention to the contrary would be based on the use of impermissible hindsight. Indeed, the difference of WT_{bar} between products obtained with the prior art "through thickness" relieving process and products obtained according to the present invention is surprising and unexpected. The claimed product with a WT_{bar} less than 0.5 kJ/m³ is commensurate in scope with this result.

¹ It should be noted that there is a typo in paragraph [0056]. Paragraph [0056] reads "WT_{bar} values obtained for the two experimental profiles shown in FIG.7 were 3.5 and 0.37 kJ/m³ inside and outside the overlap region respectively" whereas it should read "WT_{bar} values obtained for the two experimental profiles shown in FIG.4 were 3.5 and 0.37 kJ/m³ inside and outside the overlap region respectively".

² Indeed, the instant language of claims 9 and 12 require such a WT_{bar} over the entirety of the product. This is self evident from the claim language itself.

And furthermore, paragraph [0054] of the present specification demonstrates an example that shows a total stored energy W_{tot} of 14 kJ/m^3 . This is only 22% of the total stored energy obtained with a prior art short transverse (that is “through thickness”) compression stress relief process. The product of claim 19, which has a W_{tot} of 50% or less as compared to a standard short transverse compression stress relief is thus commensurate in scope with this result.

For all these reasons, it is respectfully urged that the instant rejections are improper and should be withdrawn. Favorable reconsideration is earnestly solicited.

CONCLUSION

The instant application is believed to be in condition for allowance. It is also respectfully requested that the Examiner expeditiously notify Applicant's undersigned attorney as to the disposition of the remarks presented herein in accordance with M.P.E.P. § 714.13.

Any comments or questions concerning the application can be directed to the undersigned at the telephone number given below.

Applicant believes no fee or extension of time is needed with the present response. However, the Examiner may charge any deficiency in fees or credit any overpayments to Deposit Account No. 09-0528 (Docket #: A240 1050.1).

Respectfully submitted,

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